

STI INNSBRUCK



# TOURISMUSVERBAND CONTENT ONTOLOGY MAPPINGS

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2014-02-28

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# 1. Introduction

This document presents a description of the Tourismusverband Innsbruck (TVB) alignments between the content published in TVB’s social channels and TVB’s ontology<sup>1</sup> (Akbar, Lasierra, & Tymaniuk, 2014). To perform the alignment, the analysis of activities on TVB’s website and Social Media channels was conducted for last 6 months. Particularly, the following TVB’s social channels were analyzed:

- Website: <http://www.innsbruck.info/>
- Blog: <http://blog.innsbruck.info/>
- Facebook: <https://www.facebook.com/Innsbruck>
- Twitter: <https://twitter.com/InnsbruckTVB>
- YouTube: <http://www.youtube.com/user/InnsbruckTVB>

As a first step, the ontology, which modelled major concepts and properties, to be used as an integration framework for dissemination platform, was developed. Now, as a next step, the mapping of classes and properties of the TVB ontology to published information items of relevant TVB’s Social Media channels has to be provided. Specifically, the document makes a refinement of TVB ontology and maps only those classes and properties with information items that are used in TVB’s social channels precisely. Moreover, at the current stage of the project, the analysis of the TVB’s blog is not included in the document, since it has been still in the testing phase and only recently it was started with adding new content. In detail, Facebook, Twitter and YouTube channels and corresponding mappings are examined in the following chapters.

## 2. Alignment between TVB Facebook Content and Ontology

The section describes the alignment of content with ontology for Facebook channel.

To construct the mappings firstly the history of published content was analyzed for last 6 month; afterwards, the content was divided into information items and mapped with the vocabulary, namely Schema.org as defined in (Akbar, Lasierra, & Tymaniuk, 2014).

### Hotels (schema:Hotel)

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Adlers Hotel
2	Picture	schema:image	URL	<a href="https://fbcdn-creative-a.akamaihd.net/hads">https://fbcdn-creative-a.akamaihd.net/hads</a>

<sup>1</sup> <http://oc.sti2.at/results/white-papers/tourismusverband-ontology>

3	Description	schema:description	Text	Adlers Hotel in summer
4	Address	schema:address	PostalAddress	
5	Link	schema:url	URL	www.adlers.com

### Food and Drink Establishments

Bakery (schema:Bakery)

Bar (schema:BarOrPub)

Pub (schema:BarOrPub)

Café (schema:CafeOrCoffeeShop)

FastFoodRestaurant

(schema:FastFoodRestaurant)

IceCreamShop (schema:IceCreamShop)

Restaurant (schema:Restaurant)

Winery (schema:Winery)

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Adlers Innsbruck Restaurant
2	Picture	schema:image	URL	Image URL of Adlers Restaurant
3	Description	schema:description	Text	In den Stuben und Sälen des Restaurants Schwarzer Adler erwartet Sie erstklassige Gastronomie...
4	Address	schema:address	PostalAddress	
5	Link	schema:url	URL	www.adlers.com

### Events (schema:Event)

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Silvesterlauf Innsbruck
2	Picture	schema:image	URL	https://fbcdn-creative-a.akamaihd.net/hads
3	Description	schema:description	Text	The sporty end of the year ...
4	Place	schema:location	Place	
5	StartDate	schema:startDate	DateTime	31.12.2013 16:15
6	EndDate	schema:endDate	DateTime	31.12.2013 19:15
7	More	schema:url	URL	www.innsbrucklaeuft.com

### Trips (schema:TravelAction)

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Das Sellraintal
2	Description	schema:description	Text	Das Sellraintal ist mit über

				25 ausgewiesenen Touren und ...
3	Place	schema:location	Place	
4	Picture	schema:image	URL	<a href="https://fbcdn-creative-a.akamaihd.net/hads">https://fbcdn-creative-a.akamaihd.net/hads</a>
5	More	schema:url	URL	<a href="http://www.innsbruckpauschalen.com/skitouren.html">http://www.innsbruckpauschalen.com/skitouren.html</a>

## Place of Interests

AdultEntertainment  
(schema:AdultEntertainment)

AmusementPark (schema:AmusementPark)

ArtGallery (schema:ArtGallery)

Casino (schema:Casino)

EventVenue (schema:EventVenue)

MovieTheater (schema:MovieTheater)

Mountain (schema:Mountain)

Museum (schema:Museum)

MusicVenue (schema:MusicVenue)

NightClub (schema:NightClub)

Park (schema:Park)

PerformingArtsTheater  
(schema:PerformingArtsTheater)

PlaceOfWorship (schema:PlaceOfWorship)

Stadium (schema:StadiumOrArena)

Zoo (schema:Zoo)

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Innsbrucks Olympia SkiWorld
2	Picture	schema:image	URL	<a href="https://fbcdn-creative-a.akamaihd.net/hads">https://fbcdn-creative-a.akamaihd.net/hads</a>
3	Address	schema:address	PostalAddress	
4	Description	schema:description	Text	Winter sports in the heart of ...
5	More	schema:url	URL	<a href="http://www.innsbruckpauschalen.com">www.innsbruckpauschalen.com</a>

## News (schema:BlogPosting)

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	And the winner is ...
2	Description	schema:description	Text	The winner of the Innsbruck Trails has been ...
3	Picture	schema:image	URL	<a href="https://fbcdn-creative-a.akamaihd.net/hads">https://fbcdn-creative-a.akamaihd.net/hads</a>
4	More	schema:url	URL	<a href="http://www.innsbruckpauschalen.com">www.innsbruckpauschalen.com</a>

				com
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#### Place (schema:Place)

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	MarktHalle
2	Address	schema:address	PostalAddress	

#### PostalAddress (schema:PostalAddress)

No.	Information item	Ontology property	Expected Type	Example
1	Country	schema:addressCountry	Country	
2	Region	schema:addressRegion	Text	Tyrol
3	Postal Code	schema:postalCode	Text	6020
4	Street Address	schema:streetAddress	Text	Innsbrucker str. 25

#### Country (schema:Country)

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Austria

### 3. Alignment between TVB Twitter Content and Ontology

The section describes the alignment of content with ontology for TVB Twitter channel.

Similarly to Facebook channel alignment, to build the mappings, firstly, the history of published content was analyzed for last 6 month; afterwards, the content was divided into information items and mapped with Schema.org vocabulary.

According to the analysis, conducted to define which type of content is disseminated through TVb's Twitter channel, it was discovered that there were no posts related to Hotels, Food and Drinks establishments, rather the posts related to Trips, Place of Interests and News. Bellow tables describe mappings for Events, Trips, Places of Interest and News.

#### Events

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Innsbruck läuft

2	StartDate	schema:startDate	DateTime	05.05.2014 14:00
3	EndDate	schema:endDate	DateTime	05.05.2014 14:00
3	Place	schema:location	Place	
4	Description	schema:description	Text	... sportlichen ahresausklang am Innsbrucker Marktplatz. Wenn's dunkel..
5	More	schema:url	URL	<a href="http://fb.me/3wR3Yxwuu">http://fb.me/3wR3Yxwuu</a>

## Trips

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	#Nachtskitouren rund
2	Place	schema:location	Place	
3	Description	schema:description	Text	...alle Informationen zu einer schnell wachsenden 'Sportart'...
4	More	schema:url	URL	<a href="http://fb.me/3wR3Yxwuu">http://fb.me/3wR3Yxwuu</a>

## Place of Interests

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Innsbrucks Olympia SkiWorld
2	Description	schema:description	Text	Skifahren in der Hauptstadt der Alpen ...
3	Picture	schema:image	URL	<a href="http://pic.twitter.com/sIIEOfNXaw">http://pic.twitter.com/sIIEOfNXaw</a>
4	More	schema:url	URL	<a href="http://fb.me/3wR3Yxwuu">http://fb.me/3wR3Yxwuu</a>

## News

No.	Information item	Ontology property	Expected Type	Example
1	Description	schema:description	Text	Innsbruck, 31122013, 9:20, 5C, sunny. Have a nice last day of the year!
2	More	schema:url	URL	<a href="http://fb.me/2Q5ODTzAl">http://fb.me/2Q5ODTzAl</a>

## Place (schema:Place)

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Markthalle
2	Address	schema:address	PostalAddress	



### PostalAddress (schema:PostalAddress)

No.	Information item	Ontology property	Expected Type	Example
1	Country	schema:addressCountry	Country	
2	Region	schema:addressRegion	Text	Tyrol
3	Postal Code	schema:postalCode	Text	6020
4	Street Address	schema:streetAddress	Text	Innsbrucker str.23

### Country (schema:Country)

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Austria

## 4. Alignment between TVB YouTube Content and Ontology

The section describes the alignment of content with ontology for TVB YouTube channel.

Similarly to Facebook and Twitter channel alignment, firstly, the history of published content in YouTube was analyzed for the last 6 month; afterwards, the content was divided into information items and mapped with Schema.org vocabulary.

In particular, TVB's YouTube channel includes videos regarding the food and drink establishments, events, trips, places to visit and news items. Bellow the table provide mappings for each content type respectively.

### Food and Drink Establishments

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Adlers Bar Innsbruck
2	Address	schema:address	PostalAddress	
3	Offer	schema:makesOffer	Offer	
4	Description	schema:description	Text	Innsbruck is a very special location to experience the ...

### Events

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Innsbruck's Christmas Markets

2	Place	schema:location	Place	
3	Description	schema:description	Text	Get enchanted by the flair of the Tyrolean Christmas Markets and the lovely smell of ...
4	StartDate	schema:startDate	DateTime	05.05.2014 14:00
5	EndDate	schema:endDate	DateTime	05.05.2014 14:00

### Trips

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Mieming's idyllic trails
2	Place	schema:location	Place	
3	Description	schema:description	Text	Enjoy a summer day among the mountains with your family ...
4	More	schema:url	URL	www.sonnenplateau.com

### Place of Interests

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Moeserer See
2	Address	schema:location	PostalAddress	
3	Description	schema:description	Text	The lake in the midst of pine trees and a stunning alpine scenery is the warmest bathing lakes in Tyrol.

### News

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Happy Birthday Alpenzoo Innsbruck!
2	Description	schema:description	Text	The Alpenzoo in Innsbruck is celebrating it's 50th anniversary this year. On this occasion a special issue stamp was produced ...

### Place (schema:Place)

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	MarktHalle

2	Address	schema:address	PostalAddress	
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#### PostalAddress (schema:PostalAddress)

No.	Information item	Ontology property	Expected Type	Example
1	Country	schema:addressCountry	Country	
2	Region	schema:addressRegion	Text	Tyrol
3	Postal Code	schema:postalCode	Text	6020
4	Street Address	schema:streetAddress	Text	Innsbrucker str.23

#### Country (schema:Country)

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Austria

#### Offer

No.	Information item	Ontology property	Expected Type	Example
1	Name	schema:name	Text	Drink offer
2	Description	schema:description	Text	Our bar offers cold and hot drinks

## 5. Future Work

Next steps include the implementation of rules considering the alignment of information items with an ontology. To implement the mapping mechanism, conditional rules for each mapping combination have to be constructed. Furthermore, it is important to consider the dependencies between channels to ensure that the correct order is followed. Finally, channels restrictions has to be taken into account and, if applicable, content transformation has to be performed.

## References

Akbar, Z., Lasierra, N., & Tymaniuk, S. (2014). *Tourismusverband Handbook*. OC WG.